DOCUMENT RESUME

ED 250 763 EA 017 181

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TITLE Assessing School Climate: An Attitudinal Analysis Approach.
PUB DATE 2 Mar 84
NOTE 73p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Achievement; Administrators; *Attitudes; Authoritarianism; Classroom Environment; Data Analysis; *Educational Environment; Elementary Education; *Factor Analysis; *Statistical Analysis; *Teacher Student Relationship
IDENTIFIERS Quality of School Life Scale

ABSTRACT

This study describes one type of analysis used to gather data on attitudinal climate in elementary schools. The Quality of School Life Scale (QSL) was administered to 142 4th, 5th, and 6th grade students in one southwestern elementary school. Responses to the QSL were analyzed using statistical and nonstatistical techniques. The data results are so massive that general trends are not clearly apparent. The report includes a delineation of the scoring procedure and data analysis of the QSL responses. In addition, the data were subjected to a factor analysis, which analyzed specific psychometric properties of the QSL. The researchers suggest revisions of the QSL as well as modifications of the actual scoring of the instrument. When all the school climate data from this study were viewed together, there appeared to be a problem with authoritarianism in the school being studied. This problem could be symptomatic of a system that does not allow teachers or students much choice in how learning is conducted. The report offers a recommendation for implementing a systematic method of teacher input into school policy and includes six tables and three appendixes. (MD)

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ASSESSING SCHOOL CLIMATE: AN ATTITUDINAL ANALYSIS APPROACH

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D O C U M E N T R E S U M E

TITLE: Assessing School Climate: An Attitudinal Analysis Approach

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PUBLICATION DATE: March 2, 1984

DESCRIPTORS: School Climate Report; QSL School Climate Report; Elementary School Climate Report; General Elementary School Climate Assessment.

ABSTRACT: The following article is a sample document for assessing elementary school climate. The Quality of School Life Scale (QSL), a widely-used elementary school climate instrument was administered to 141 fourth, fifth, and sixth grade students in an elementary school in the Southwestern United States.

This document includes scoring procedures and data analysis. In addition, the results of a factor analysis of the data are reported. Within this context, specific psychometric properties of the instrument are analyzed and reported. Suggested revisions of the instrument are reported, along with modifications in the actual scoring of the instrument itself.

Those involved in the processes of educational management and interested in utilizing educational software may wish to review this elementary school climate document.

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ASSESSING SCHOOL CLIMATE:
AN ATTITUDINAL ANALYSIS APPROACH

by William L. Johnson, Ed. D. and Claire Nussbaum, Ed. D.

Aspects of School Climate

One anticipated outcome of Teacher Corps projects is an "improved school climate which fosters the learning of children of low-income families" (Federal Register, February 23, 1978. p. 7533). Before school climate can be improved, some form of assessment must clarify existing school conditions. Once existing conditions are delineated, appropriate programs may be developed and implemented to accomplish the goal of improving school climate. After implementation of the prescribed programs, school climate may again be evaluated to determine the effectiveness of the programming.

The term "school climate," however, is a broad concept which can reflect numerous aspects of the educational process. School climate may include anything from environmental aspects of the school (such as building maintenance and equipment) to the personalities of the students and educators involved in the school, as well as academic performance, levels of physical activity, and the processes and materials used throughout instructional procedures. Thus, there are many possible methods of examining school climate, depending upon the definition used for the term. Undoubtedly, the best analysis of school climate would include objective measurement of all aspects of the school situation within the practical limits of federal funding; however, a total assessment

of school climate is usually not possible. One relatively inexpensive method of evaluating school climate is an approach which examines in detail the attitudinal or emotional climate of the school as one of several indicators of the total school environment. While other aspects of school climate (such as academic performance levels) are of equal importance, examination of the attitudinal climate of the school offers some insight into the total school situation without necessitating massive research efforts, since the university component of Teacher Corps programs usually has access to computer time and personnel who can analyze statistics.

The purpose of this study is description of one type of analysis which may be used to gather baseline data regarding the attitudinal climate in an elementary school for the purpose of Teacher Corps design. This type of analysis, to be most effective, must be compared with other relevant data about a school, but for the purposes of this report, description will be limited to the analysis used to obtain a quantified description of the attitudinal climate within an elementary Teacher Corps school. All statistical tests were calculated using computerized programs as described by Nie and Associates, 1979, in Statistical Package for the Social Sciences.

Instrumentation and Subjects

The elementary school used in the study will be called Lincoln Elementary School, the elementary school of a public school district/State University Teacher Corps project in a Southwestern state. To examine the attitudinal climate of the school, the copyrighted Houghton Mifflin QSL (The Quality of School Life Scale), which has been widely used with elementary-aged students, was chosen. The QSL was utilized to permit some quantifiable analysis of attitudes toward the school and was administered early in the first implementation year of the Teacher Corps project. The QSL scale was designed by Houghton Mifflin to reflect students' feelings about their school and specific school occurences. The instrument included both true-false questions (items 15-27), and multiple choice items which included statements to which participants could respond in terms of four-to-five choices ranging from strong positive evaluation to strong negative evaluation of the statement. Also included were some Likert formated items in which the participant could respond to a statement in terms of five responses ranging from "always" or "all" to "never" or "none". Likert, multiple choice, and true-false items, as well as an open-ended section, asked students to respond with their feelings about the school and their perceived reasons for these feelings. The QSL was administered to the fourth, fifth, and sixth grade students at the elementary school. Results in the following analysis of the QSL were based on the responses

of students at each grade level, as well as on a composite of all students, grades four to six, considered as one group. The number of participants for each level was as follows:

Fourth grade, n=60;

Fifth grade, n=57;

Sixth grade, n=24; and,

All participants considered as one group, N=141.

For the purposes of the following report, analyses were based primarily upon the composite responses of all students who participated in the study, although each of the various statistical tests applied to the data were also calculated for each grade level separately and appear in the tables reporting the various data and statistical tests. Description of the analyses were reported based on composite responses (N=141) to simplify the report, and because application of Spearman's Rho rank order coefficients of correlation (which are explained later in the report) indicated that ranked responses of each grade level separately, when compared to composite ranked responses, were statistically equivalent to the composite values. Thus, the composite values are a statistically accurate reflection of each grade level if considered separately; so, the reporting process was simplified by using primarily composite data.

Types of Procedures

Responses to the QSL were analyzed using both statistical and non-statistical techniques. The procedures which were utilized in the analyses are noted in the following paragraphs.

1. The non-statistical tabulation of the number of responses to each possible answer to every item on the QSL was conducted, by separate grade level and the composite responses (all grade levels considered as one group).
2. The non-statistical tabulation of percentages of responses to each possible answer to every item on the QSL was conducted by separate grade level and the composite percentage responses of all grades considered as one group.
3. The Chi square test was applied to the true-false (TF) items (questions 1-14) to determine if the response rate in a positive or negative direction was greater than that which could be expected by chance. The Chi square test was applied to each grade level as well as to the composite responses.
4. A school climate index was calculated for each item on the QSL. All twenty-seven items on the QSL were re-scored on a scale of one to five. The details of the re-scoring procedure is ex-

plained later in the report, but basically items were scored so that a response indicative of positive school climate had a value near five. Responses indicative of negative school climate had a value close to one.

Once items were re-scored, a school climate index for each item on the QSL was calculated by multiplying the number of responses to a choice by the designated value of that choice for the item. The various values for all choices to an item were then summed and divided by the total number of respondents for that item. This score was then used as the school climate index for that item. Thus, there are twenty-seven school climate indices. This procedure was applied to each item on the QSL for every grade level independently, as well as for the entire group of respondents considered as one group.

5. The twenty-seven school climate indices were then ranked in descending order; that is, the item showing the highest school climate index (the item reflecting the most positive attitude toward school climate) was ranked one, and the item reflecting the most negative attitude toward school climate was ranked twenty-seven.

The highest and lowest ranked items were then examined to determine strengths and weaknesses of the school in terms of attitudinal school climate. As in all other cases, this procedure was completed for each grade level, as well as for the composite group.

6. A school climate score was calculated/based on the school climate indices. To determine the school climate score, the twenty-seven were summed. Theoretically a school with an "ideal" school climate would exhibit a school climate score of 135 (twenty-seven items multiplied by five, which was designated as the value of the most positive response to each item on the QSL in terms of school climate.) In addition to calculating the school climate score for each grade level and for the composite group, the school climate scores were compared to the possible "ideal" school climate score (135) to provide a percentage value to use in considering overall school climate.

7. A factor analysis was performed to reduce the quantity of data in the analysis and resulted in three major factors (groupings of items) which were used to note some general trends in

participants' responses. The factor analysis reduced the twenty-seven items of the QSL to sixteen. Of the remaining sixteen items the questions were ranked a second time on the basis of the school climate index of each item. Items in each factor where then considered in terms of the number of items falling above and below the midpoint of the sixteen ranks and in terms of the content represented by these items.

8. The high rate of response to the open-ended section was noted, although open ended responses were not analyzed in detail as to content.

9. Items from the factor analysis were graphed in terms of positive and negative responses to aid in a general understanding of the report.

10. Finally, the results of the various procedures used in the analysis were summarized and recommendations were made based on these results for program design at the school.

A more detailed description of the procedures used and the conclusions drawn from the results of the analysis, constitute the remainder of this report. With a few minor exceptions, all remaining sections of the report describe only data related to the composite responses of all

141 students, although similar information is included in the tables for each grade level, as well as for the composite data.

Results of Procedures

Tabulation Results. Non-statistical tabulation of the number of responses to each item by the choice participants selected appear in Table I. Numbers of responses to the various choices for each item are also recorded in terms of percentage of responses. Information from this type of data, however, is so massive that general trends are not clearly apparent.

Table I
(Page 1)
SUMMARIZATION OF STUDENTS' RESPONSES

QUESTION	STATEMENT (True - False Items 1-14)	(n=60) GRADE 4 T	F	(n=57) GRADE 5 T	F	(n=24) GRADE 6 T	F	(N=141) COMPOSITE T	F
1.	In class, I often count the minutes till it ends.	16 26.6%	44(.001)* 73.3%**	5 8.8%	52(.001) 91.2%	7 29.2%	17(.05) 70.8%	28 19.9%	113(.001) 80.1%
2.	I wish I could have the same teachers next year.	31 51.6%	29 48.3%	35 61.4%	22 38.6%	14 58.3%	10 41.7%	80 56.7%	61 43.3%
3.	Most of the time I do not want to go to school.	34 56.6%	26 43.3%	29 50.9%	28 49.1%	15 62.5%	9 37.5%	78 55.3%	63 44.7%
4.	Most my teachers want me to do things their way and not my own way.	33 55%	27 45%	36 63.2%	21(.05) 36.8%	17 70.8%	7(.05) 29.2%	86 61.8%	55(.01) 39.0%
5.	I hardly ever do anything very exciting in class.	22 36.6%	38(.05) 63.3%	23 40.3%	34 59.7%	11 45.8%	13 54.2%	56 39.7%	85(.05) 60.3%
6.	My teachers often act as if they are always right and I am wrong.	28 46.6%	32 53.3%	20 35.1%	37(.05) 64.9%	14 58.3%	10 41.7%	62 44.0%	79 56.0%
7.	I am very happy when I am in school.	41 68.3%	19(.01) 31.7%	32 56.1%	25 43.9%	14 *58.3%	9 37.5%	87 61.7%	53(.01) 38.3%
8.	Most of my teachers really listen to what I have to say	47 78.3%	13(.001) 21.7%	47 82.5%	10(.001) 17.5%	16 66.7%	7 33.3%	110 78.0%	30(.001) 22.0%

* Significance level is in parenthesis
** Percentage value of response

Table I
(Page 2)
SUMMARIZATION OF STUDENTS' RESPONSES

QUESTION STATEMENT (True - False Items 1-14)	(n=60) GRADE 4 T	F	(n=57) GRADE 5 T	F	(n=24) GRADE 6 T	F	(N=141) COMPOSITE T	F
9. I daydream a lot in class.	16 26.7%	44(.001) 73.3%	11 19.3%	46(.001) 80.7%	9 37.5%	14 58.3%	36 25.5%	104(.001) 74.5%
10. Certain students in my class are favored by my teachers more than the rest.	28 46.7%	32 53.3%	23 40.4%	34 59.6%	9 37.5%	15 62.5%	60 42.6%	81 57.4%
11. I like school very much.	38 63.3%	22(.05) 36.7%	28 49.1%	29 50.8%	10 41.7%	14 58.3%	76 53.9%	65 46.1%
12. Teachers here have a way with students that makes me like them.	42 70%	18(.01) 30%	41 71.9%	16(.001) 28.1%	15 37.5%	9 62.5%	98 69.5%	43(.001) 30.5%
13. Most of the topics we study in class can't end soon enough to suit me.	32 53.3%	28 46.6%	24 42.1%	33 57.9%	14 58.3%	10 41.7%	70 49.6%	71 50.4%
14. Most of my teachers do not like me to ask a lot of questions during a lesson.	33 55%	27 45%	29 50.9%	28 49.1%	11 45.8%	13 54.2%	73 51.8%	68 48.2%

* Significance level is in parenthesis
** Percentage value of response

Table I
(Page 3)
SUMMARIZATION OF STUDENTS' RESPONSES

QUESTION	STATEMENT (Multiple Choice Items 15-27)	(n=60) GRADE 4		(n=57) GRADE 5		(n=24) GRADE 6		(N-141) COMPOSITE	
15.	This term I am eager to get to ...								
	1. all of my classes.....	35	(58.3)+	22	(38.6)	6	(25.0)	63	(44.7)
	2. most of my classes.....	8	(13.3)	9	(15.8)	4	(16.7)	21	(14.9)
	3. about half my classes.....	5	(8.3)	8	(14.0)	4	(16.7)	17	(12.1)
	4. one or two of my classes.....	9	(15.0)	8	(14.0)	4	(16.7)	21	(14.9)
	5. none of my classes.	3	(5.0)	10	(17.5)	6	(25.0)	19	(13.5)
16.	(Rating your teachers) my teachers are...								
	1. far above average.....	23	(38.3)	14	(24.6)	4	(16.7)	41	(29.1)
	2. above average.....	15	(25.0)	8	(14.0)	3	(12.5)	26	(18.4)
	3. average.....	16	(26.7)	26	(45.6)	14	(58.3)	56	(39.7)
	4. below average.....	3	(5.0)	5	(8.8)	1	(4.2)	9	(6.4)
	5. far below average.	3	(5.0)	4	(7.0)	2	(8.3)	9	(6.4)
17.	(In classes -- so interested that I don't want the classes to stop)								
	1. never.....	17	(28.3)	14	(24.6)	5	(20.8)	36	(25.5)
	2. hardly ever.....	5	(8.3)	15	(26.3)	5	(20.8)	25	(17.7)
	3. quite often.....	18	(30.0)	18	(31.6)	9	(37.5)	45	(31.9)
	4. every day.	20	(33.3)	10	(17.5)	5	(20.8)	35	(24.8)
18.	Thinking of my teachers this term, I really like...								
	1. all of them.....	35	(58.3)	27	(47.4)	11	(45.8)	73	(51.8)
	2. most of them.....	8	(13.3)	14	(24.6)	2	(8.3)	24	(17.0)
	3. half of them.....	5	(8.3)	8	(14.0)	1	(4.2)	14	(9.9)
	4. one or two of them.....	11	(18.3)	7	(12.3)	7	(29.2)	25	(17.7)
	5. none of them.	1	(1.7)	1	(1.8)	3	(12.5)	5	(3.5)

+ value in parenthesis is percentage

Table I
(Page 4)
SUMMARIZATION OF STUDENTS' RESPONSES

QUESTION	STATEMENT	(n=60) GRADE 4		(n=57) GRADE 5		(n=24) GRADE 6		(N=141) COMPOSITE	
19.	The school and I are like....								
	1. good friends.....	29	(48.3)+	25	(43.9)	10	(41.7)	64	(45.5)
	2. friends.....	18	(30.0)	17	(29.8)	6	(25.0)	41	(29.1)
	3. distant relatives.....	2	(3.3)	4	(7.0)	2	(8.3)	8	(5.7)
	4. strangers.....	1	(1.7)	3	(5.3)	0	(0.0)	4	(2.8)
	5. enemies.	10	(16.7)	8	(14.0)	6	(25.0)	24	(17.0)
20.	The work I do in most classes is...								
	1. not at all important to me	4	(6.7)	7	(12.3)	4	(16.7)	15	(10.6)
	2. not too important to me...	6	(10.0)	5	(8.8)	3	(12.5)	14	(9.9)
	3. pretty important to me....	8	(13.3)	12	(21.1)	4	(16.7)	24	(17.0)
	4. very important to me.	42	(70.0)	33	(57.9)	13	(54.2)	88	(62.4)
21.	This term my teachers and I are...								
	1. on the same wavelength....	16	(26.7)	9	(15.8)	4	(16.7)	29	(20.6)
	2. on the same planet.....	25	(41.7)	29	(50.9)	12	(50.0)	66	(46.8)
	3. some where on the same solar system	9	(15.0)	9	(15.8)	3	(12.5)	21	(14.9)
	4. in two different worlds.	10	(16.7)	10	(17.5)	5	(20.8)	25	(17.7)
22.	The things I get to work on in most of my classes are...								
	1. great stuff--really interesting to me.....	28	(46.7)	12	(21.1)	5	(20.8)	45	(31.9)
	2. good stuff--pretty interesting to me.....	9	(15.0)	18	(31.6)	6	(25.0)	33	(23.4)
	3. ok--school work is school work	15	(25.0)	19	(33.3)	8	(33.3)	42	(29.8)
	4. dull stuff--not very interesting to me.....	2	(3.3)	4	(7.0)	1	(4.2)	7	(5.0)
	5. trash--a total loss of time.	6	(10.0)	4	(7.0)	4	(16.7)	14	(9.9)

+ value in parenthesis is percentage

Table I

(Page 5)

SUMMARIZATION OF STUDENTS' RESPONSES

QUESTION	STATEMENT	(n=60) GRADE 4		(n=57) GRADE 5		(n=24) GRADE 6		(N=141) COMPOSITE	
23.	(If you could choose), how many of your present courses would you take.....								
	1. All of them.....	28	(46.7)+	22	(38.6)	6	(25.0)	56.	(39.7)
	2. More than half.....	8	(13.3)	11	(19.3)	1	(4.2)	20	(14.2)
	3. About half.....	20	(33.3)	14	(24.6)	5	(20.8)	39	(27.7)
	4. Fewer than half.....	2	(3.3)	7	(12.3)	7	(29.2)	16	(11.3)
	5. None of them.	2	(3.3)	3	(5.3)	5	(20.8)	10	(7.1)
24.	I enjoy the work I do in class								
	1. Never.....	2	(3.3)	4	(17.0)	5	(20.8)	11	(7.8)
	2. Seldom.....	0	(0.0)	1	(1.8)	0	(0.0)	1	(0.7)
	3. Sometimes.....	24	(40.0)	32	(56.1)	13	(54.2)	69	(48.9)
	4. Often.....	12	(20.0)	8	(14.0)	4	(16.7)	24	(17.0)
	5. Always.	22	(36.7)	12	(21.1)	2	(18.3)	36	(25.5)
25.	Work in class is just busy work and a waste of time.....								
	1. Never.....	18	(30.0)	25	(43.9)	10	(41.7)	53	(37.6)
	2. Seldom.....	6	(10.0)	4	(7.0)	5	(20.8)	15	(10.6)
	3. Sometimes.....	20	(33.3)	17	(29.8)	2	(8.3)	39	(27.7)
	4. Often.....	10	(16.7)	10	(17.5)	3	(12.5)	23	(16.3)
	5. Always.	6	(10.0)	1	(1.8)	4	(16.7)	11	(7.8)
26.	I feel I can go to my teacher with the things that are on my mind.....								
	1. Never.....	9	(15.0)	15	(26.3)	8	(33.3)	32	(22.7)

+ value in parenthesis is percentage

Table I
(Page 6)
SUMMARIZATION OF STUDENTS' RESPONSES

QUESTION	STATEMENT	(n=60) GRADE 4		(n=57) GRADE 5		(n=24) GRADE 6		(N=141) COMPOSITE	
	2. Seldom.....	6	(10.0)	5	(8.8)	1	(4.2)	12	(18.5)
	3. Sometimes.....	22	(36.7)+	22	(38.6)	7	(29.2)	51	(36.2)
	4. Often.....	11	(18.3)	6	(10.5)	1	(4.2)	18	(12.8)
	5. Always.	12	(20.0)	9	(15.8)	7	(29.2)	28	(19.9)
27.	School work is dull and boring to me.....								
	1. Never.....	27	(45.0)	25	(43.9)	6	(25.0)	50	(35.5)
	2. Seldom.....	12	(20.0)	4	(7.0)	2	(8.3)	19	(13.5)
	3. Sometimes.....	14	(23.3)	17	(29.8)	9	(37.5)	40	(28.4)
	4. Often.....	2	(3.3)	10	(17.5)	2	(8.3)	14	(9.9)
	5. Always.	5	(8.3)	1.	(1.8)	5	(20.8)	18	(12.8)

+ value in parenthesis is percentage

Chi Square Analysis. Items 1-14 of the QSL were true-false (TF) items. The Chi Square test was applied to each of these items. Items showing a significant response level, arranged with the Chi-square in order of descending magnitude and based on composite figures were as follows:

1. Question	1	"I often count the minutes till class ends" (students responded negatively to this question)	X^2 =51.2	p=.001
2. Question	8	"Most of my teachers listen to me"	X^2 =45.39	p=.001
3. Question	9	"I daydream a lot in class" (students responded mainly negatively to this question)	X^2 =32.9	p=.001
4. Question	12	"I like my teachers"	X^2 =32.9	p=.001
5. Question	7	"I am very happy in this school"	X^2 =7.72	p=.01
6. Question	4	"Most of the teachers want me to do things their way"	X^2 =6.81	p=.01
7. Question	5	"I hardly every do anything exciting in my class" (Students responded negatively to this statement)	X^2 =5.96	p=.05

Of the above seven items, six indicated significance in a positive direction; that is, responses were indicative of a positive school climate. Question 4, however, showed responses were statistically significant, and reflective of a negative school climate. Question 4 will be discussed in greater detail in conjunction with the factor analysis section of this report.

For the rest of the questions (2, 3, 6, 10, 11, 13, and 14) in the true-false section, the Chi-square values were not beyond what pure chance would allow. In other words, the

students were fairly evenly divided in their responses. These questions and percentage responses were as follows:

1. Question 2 "I wish I could have the same teachers next year" T(57%) F(43%)
2. Question 3 "Most of the time I do not want to go to school" T(55%) F(45%)
3. Question 6 "My teachers often act as if they are always right and I am wrong" T(44%) F(56%)
4. Question 10 "Certain students in my classes are favored by my teachers more than the rest" T(43%) F(57%)
5. Question 11 "I like school very much" T(54%) F(46%)
6. Question 13 "Most of the topics we study in class can't end soon enough to suit me" T(50%) F(50%)
7. Question 14 "Most of my teachers do not like me to ask a lot of questions during a lesson." T(52%) F(48%)

(Chi Square data for each grade level considered separately appear in Appendix I.)

School Climate Indices. Because the QSL consisted of two sections, a fourteen item true-false section and a thirteen item multiple choice and Likert formated section, the responses for items were not based on uniform numerical values throughout the instrument. To compensate for this factor, responses to items were re-scored to obtain numerical values which could be used for purposes of comparison and to permit extraction of trends in the data. The re-scoring procedure was somewhat arbitrary; that is, each item was read by several individuals

and the answer (in terms of content) considered to be most negative (in terms of school climate) was assigned a value of one. The answer to an item considered to be most positive (in terms of school climate) was assigned a value of five. Thus, responses to true-false items (questions 1 to 14) were assigned values of one or five, with a five representing a response indicative of postive school climate, and a response of one representing a negative school climate. This procedure eliminated some of the confusion which occurs when discussing true-false items; that is, the scoring eliminated the necessity of indicating if a false answer to a negatively worded statement is indicative of a positive or a negative school climate. Using this system of scoring, responses approaching a value of five (when averaged) were always indicative of positive school climate, while those approaching a value of one were always indicative of negative school climate. One disadvantage of this method, however, exists in the possible different interpretations of what constitutes an ideal response to a particular item. (Piaget, Skinner or Bruner might not agree on what exists when an ideal school climate occurs).

Items fifteen to twenty-seven, the multiple choice and Likert-formated questions, consisted of several responses from which to choose an answer. However, some items were designed with four choices, while others were designed with

five choices. The four choice items were weighted so the total maximum (ideal) value was five and the lowest value approached one. Again, responses to items were rated by readers in content terms as to which choice represented the most positive school climate response and the least positive response. The necessity of re-scoring the QSL, obviously, is an indication that the instrument could be considerably improved by standardizing the type of response requested for each item throughout the instrument.

Once the QSL was re-scored using the five-point system, a school climate index was calculated for each item. Although this procedure has already been briefly discussed, an actual example of the procedure is as follows;

1. Item sixteen states, "How would you rate the ability of most of your teachers compared to teachers in other schools at <u>your</u> grade level? My teachers are...

   (Choice) 1. Far below average
   (Choice) 2. Below average
   (Choice) 3. Average
   (Choice) 4. Above average
   (Choice) 5. Far above average."

The re-scoring on this item is already incorporated as written above; the original item on the QSL had "far above average" assigned a value of one, and "far below average"

assigned a value of five. Since the "ideal" response to this item would be teachers that are "far above average," this choice became the response assigned a value of five, while the least desirable responses in terms of school climate--teachers that are "far below average" -- became the choice assigned a value of one. (These transformations in values were accomplished by those tabulating the responses--not by re-wording the items on the instrument before students responded).

Using composite responses, replies were as follows:

Choice 1 - 9 respondents (most negative school climate response)

Choice 2 - 9 respondents

Choice 3 - 56 respondents

Choice 4 - 26 respondents

Choice 5 - 41 respondents (most positive school climate response.)

To calculate the school climate index for item 16, the number of respondents to each choice was multiplied by the value for that particular choice; these values were then summed and divided by the total number of respondents to item 16, as follows:

+9 x 1 = 9
+9 x 2 = 18
+56 x 3 = 168
+26 x 4 = 104

$(N_{total} = \frac{+41 \text{ X } 5 = 205}{141)\quad 504}$ divided by 141 = 3.57 (School Climate Index, Item 16).

Thus 3.57 is the school climate index for item 16 for the composite responses. The climate index for each item on the QSL was calculated in this manner.

The school climate indices for the twenty-seven QSL items appear in Table II. The indices were next ranked in descending magnitude; that is, the item with the largest school climate index (and, therefore the item representing the most positive response in terms of school climate) was ranked one, while the item reflecting the least positive school climate was ranked twenty-seventh. The rankings of items according to school climate indices also appear in Table II. The highest school climate index was 4.20 (item 1) while the lowest was 2.56 (item 4.)

Utilizing the rankings of the school climate indices, the five items appeared to be those to which students responded most <u>positively</u> in terms of school climate:

Rank 1. Question 1 "In class I often count the minutes till it ends" (True-false item)

Rank 2. Question 20 "The work I do in most classes is...

....not at all important to me

....not too important to me

Table II

QUESTION RANKINGS OF THE CLIMATE INDICES
For All Questions
(Questions 1-27)

Question	Composite Rank	Grade 4	Grade 5	Grade 6
1	1 (4.20)*	6 (3.93)	1 (4.65)	1 (3.83)
20	2 (4.14)	1 (4.33)	4 (4.05)	18 (3.02)
8	3 (4.11)	2 (4.13)	2 (4.29)	2 (3.62)
18	4 (3.95)	3 (4.08)	5 (4.03)	7 (3.45)
19	5 (3.82)	8 (3.91)	7 (3.84)	3.5 (3.58)
12	6 (3.78)	13 (3.80)	6 (3.87)	5.5 (3.50)
23	7 (3.68)	6 (3.93)	9 (3.73)	22 (2.83)
15	8.5 (3.62)	4 (4.05)	14 (3.43)	20 (2.91)
22	8.5 (3.62)	12 (3.85)	12 (3.52)	10 (3.29)
25	10 (3.61)	19 (3.33)	9 (3.73)	3.5 (3.58)
16	11 (3.57)	10.5 (3.86)	21 (3.22)	14 (3.21)
24	12 (3.51)	10.5 (3.86)	15 (3.40)	20 (2.91)
27	13 (3.49)	9 (3.90)	9 (3.73)	17 (3.08)
7	14 (3.46)	14 (3.73)	20 (3.24)	10 (3.29)
5	15 (3.41)	15 (3.53)	16.5 (3.38)	15.5 (3.16)
21	16 (3.37)	17 (3.47)	18.5 (3.31)	12 (3.28)
9	17 (3.30)	6 (3.93)	3 (4.23)	10 (3.29)
10	18 (3.29)	21.5 (3.13)	16.5 (3.38)	5.5 (3.50)
2	19 (3.27)	23 (3.06)	13 (3.45)	8 (3.33)
6	20 (3.24)	21.5 (3.13)	11 (3.59)	24 (2.66)
17	21 (3.20)	18 (3.35)	22 (3.02)	13 (3.22)
11	22 (3.15)	16 (3.51)	24 (2.96)	24 (2.66)
13	23 (3.01)	24 (2.86)	18.5 (3.31)	24 (2.66)
26	24 (2.98)	20 (3.18)	26 (2.80)	20 (2.91)
14	25 (2.93)	25.5 (2.80)	24 (2.96)	15.5 (3.16)
3	26 (2.78)	27 (2.73)	24 (2.96)	26 (2.50)
4	27 (2.56)	25.5 (2.80)	27 (2.47)	27 (2.16)

* School climate index for item appears in parentheses

.... pretty important to me

.... very important to me"

Rank 3. Question 8 "Most of my teachers really listen to what I have to say" (True-false item)

Rank 4. Question 18 "Thinking of my teachers this term, I really like...

.... all of them

.... most of them

.... half of them

.... one or two of them

.... none of them"

Rank 5. Question 19 "The school and I are like...

.... Good freinds

.... Friends

.... Distant Relatives

.... Strangers

.... Enemies."

The following five items appeared to be those to which students responded the most negatively in terms of school climate:

Rank 23. Question 13 "Most of the topics we study in class can't end soon enough to suit me" (True-false item)

Rank 24. Question 26 "I feel I can go to my teacher with the things that are on my mind" (Choices - Always often, sometimes, seldom, never)

Rank 25. Question 14 "Most of my teachers do not like me to ask a lot of questions during a lesson" (True-false item)

Rank 26. Question 3 "Most of the time I do not want to go to school" (True-false item)

Rank 27. (Most negative item in the rankings.) Question 4. "Most of my teachers want me to do things their way and not my own way" (True-false item.)

Negative and positive indications of the ranked items will be discussed further in the factor analysis section the report.

Spearman's Rho Rank Order Coefficients of Correlation. Although the Spearman's rho correlations are reported at this point in the study, the results of these correlations were used to make the decision to report only composite results in the study. The rankings for each level (grades 4, 5, and 6), as well as for composite responses for each item on the QSL, were determined, as noted in Table II. The rankings, based on the school climate indices, were used to calculate Spearman's rho coefficients of correlation between grade levels, and between each grade level and the composite QSL responses. The purpose of this procedure was to determine whether or not individual grade levels' rankings differed

statistically from those of the entire school (composite) rankings.

The results were as follow:

1. Composite rankings and grade 4 rankings were the same statistically (rho = 0.87);
2. Composite rankings and grade 5 rankings were the same statistically (rho = 0.82); and,
3. Composite rankings and grade 6 rankings were the same statistically (rho = 0.60.)

Thus, the compostie school indices' rankings, as compared with each grade, were statistically equivalent. This result was used to determine that primarily composite data would be reported in the study.

Spearman's rho was also calculated between school indices' of the various grade levels. The rankings for grade 4 and grade 5 were statistically equivalent (rho = 0.73.) Grade 5 and grade 6 were statistically equivalent (rho = 0.59); however, question rankings for grade 4 and grade 6 were not the same statistically (rho = 0.37.) In other words, the larger the value of rho, the more similar were students' responses in those grade levels to one another; Grade 4 and grade 5 were most similar; grade 5 and grade 6 were next in degree of similarity; and, grade 4 and grade 6 were least similar in response. This effect, of course, could probably have been predicted as a natural

occurence accompanying the maturation of students from grade 4 to grade 6.

School Climate Score. To gain an overall view of school climate, the school climate score was calculated based on the school climate indices. The twenty-seven indices for each grade level, as well as for composite responses, were summed. These values were them compared in percentage terms to the possible "ideal" score of 135 for the whole instrument. (The most positive school climate response to an item would be a value of five; there are twenty-seven items. Thus, an "ideal" positive school climate score consisted of twenty-seven multiplied by five, or a total score of 135.)

The school climate scores for each grade level and for composite responses, as well as their percentage value of the "ideal" score were as shown in the following table. (Table II.)

Although use of percentages is not a statistical technique, two trends were noted from the data in Table III;

1. Positive attitude toward school climate appears to decrease slightly as students mature; and,
2. If school climate percentage scores, according to the data in Table III, were to be converted into "grades" (A,B,C,D,F) such as those given students upon the basis of percentage scores on examinations and class work, the school (overall or composite) would receive a grade of "D" for school climate.

TABLE III*

School Climate Scores and Percentage of Ideal School Climate Score

Group	School Climate Score	Percentage of ideal school climate score
Grade 4 (n=60)	96.17	71.23
Grade 5 (n=57)	94.55	70.03
Grade 6 (n=24)	84.59	62.65
COMPOSITE (N=141) total	93.05	68.92

*Further details of these figures appear in Appendix II.

Factor Analysis. A factor analysis was applied to the data and accepting only factors with an Eigenvalue greater than one, three factors (groupings of items) were obtained. Using the three factors, only sixteen of the twenty-seven QSL items were retained. Based upon the content of the three factors, they appeared to deal with the following topics:

1. Factor One. Factor one was named "School Relationship" (RE) and consisted of nine items. In general the factor seemed to reflect students' perceptions of their personal relationship to the school as a whole.
2. Factor Two. Factor two was named "School Satisfaction" (SA) and consisted of four items. These items appeared to reflect students' perceptions of their satisfaction with school in terms of classes and courses.
3. Factor Three. Factor three was entitled "School Structure" (ST) and consisted of three items. These items seemed to reflect students' perceptions of the structure of the school, especially in terms of authority.

Eigenvalues, factors and factor loadings for items within the factors appear in Table IV. Since the sixteen

items isolated by the factor analysis accounted for 65.9 percent of the variance in the composite responses, further examination of these sixteen items was conducted.

Using the sixteen factor analysis items, the climate index of each item was noted. The climate indices were then ranked in order of descending magnitude, which resulted in an abbreviated ranking of QSL items similar to that of Table II for all twenty-seven items. The abbreviated sixteen rankings appear in Table V, with a line indicating the upper half and the lower half of the rankings. Those items in the upper ranks were considered to be representative of a more positive school climate, while those in the lower eight ranks were considered to be representative of a less positive school climate. This information about positive and negative school climate was then noted in relation to items with each factor, as shown in Table VI.

As can be noted in Table VI, there are a number of items in both Factor 1 and Factor 2 which indicated that students seemed to perceive good relationships with their teachers and, at the classroom level, seemed to like school. However, there are many negative items in Factor 1, which seemed to indicate, in general, that students do not want to go to school. When the wording of these items was closely noted, this attitude seemed to be directed at the school--as a whole--but not necessarily at the classroom situation.

Table IV
(Page 1)
Item Factor Loadings, Eigenvalues,[1] Percent Variance, and Composition of Factors

FACTOR	FACTOR NAME	EIGEN-VALUE	PERCENT VARIANCE	ITEM FACTOR LOADING [2]		ITEM ON QSL
1	School Relation-ship (RE)	5.39	45.5	.66485	3.	Most of the time[5] I do not want to go to school (TF)
				.61413	7.	I am very happy when I go to school (TF)
				.69677	11.	I like school very much (TF)
				.31867 [3]	13.	Most of the topics we study in class can't end soon enough to suit me (TF)
				.29753 [4]	15.	This term I an eager to get to (all/none)of my classes.
				.34574	16.	How would you rate your teachers? (Far above/ far below) average
				.36623	22.	The things I get to work on in class are (great stuff/trash)
				.53588	24.	I enjoy the work I do in class (Always/never)
				.61066	27.	School work is dull and boring for me (always/ never)
2	School Satisfaction (SA)	1.39	11.8	.60200	18.	Thinking of my teachers this term, I really like (all/none) of them
				.57456	19.	The school and I are like (good friends/enemies)
				.54993	20.	The work I do in most classes is (not at all important to me/very important to me)
				.40404	23.	If you could choose to take any course at all, how many of your present courses would you take? (all/none)

Table IV

(Page 2)

FACTOR	FACTOR NAME	EIGEN-VALUE	PERCENT VARIANCE	ITEM FACTOR LOADING[2]		ITEM ON QSL
3	School Structure (ST)	1.01	8.6	.61636	4.	Most of my teachers want me to do things their way and not my own way (TF)
				.63809	6.	My teachers often act as if they are always right and I am wrong (TF)
				.43734	25.	Work in class is just busy work and a waste of time (always/never)

1-Varimax rotation

2-A value of 0.30000 was used as the lowest loading accepted.

3-Item 13 had a double loading; that is, it also appeared in Factor 3 (with a higher loading), but the content was much more suitable to Factor 1.

4-Item 15 was accepted because its rounded value was 0.30000.

5-If a response other than "TF" (True-False) follows an item, the item was a multiple choice item consisting of 4 or 5 choices. When the item was mutiple choice, only the first and last choice are shown to conserve space.

Table V

Rankings of Items in Factor Analysis of the QSL

	Rank[1]	Item[2]	Factor[3]	School Climate Index[4]	
	1	20	2 - SA	4.14	
	2	18	2 - SA	3.95	
	3	19	2 - SA	3.82	
	4	23	2 - SA	3.68	
(Positive	5.5	15	1 - RE	3.62	
Attitudes)	5.5	22	1 - RE	3.62	
	7	25	3 - ST	3.61	
	8	16	1 - RE	3.57	
					Midpoint of Ranks
	9	24	1 - RE	3.51	
	10	27	1 - RE	3.49	
	11	7	1 - RE	3.46	
	12	6	1 - RE	3.24	
(Negative	13	11	1 - RE	3.15	
Attitudes)	14	13	1 - RE	3.01	
	15	3	3 - ST	2.78	
	16	4	3 - ST	2.56	

(1) Rankings based on school climate indices
(2) Eleven of the 27 items on the QSL are deleted using the factor analysis
(3) Factor 1 - School Relationship ---- RE
Factor 2 - School Satisfaction ---- SA
Factor 3 - School Structure ---- ST
(4) A value of 5 indicates an ideal positive index; a value of one indicates a completely negative response

Table VI

Factors with items Shown in Relation to Rankings* 33

FACTOR 1 - SCHOOL RELATIONSHIP (RE)

\+ Upper ranked items

15. This term I am eager to get to (all/none) of my classes
16. Rating ability of teachers (far above/below) average
22. Things I get to work on in class (great stuff/trash)

\- Lower ranked items

3. Most of the time I do not want to go to school (TF)
7. I am very happy when I am in school (TF)
11. I like school very much (TF)
13. Most of the topics we study in class can't end soon enough to suit me (TF)
24. I enjoy the work I do in class (Always/never)
27. School work is dull and boring for me (Always/never)

FACTOR 2 - SCHOOL/COURSES SATISFACTION (SA)

\+ All in upper rankings

18. Thinking of my teachers this term, I really like (all/none) of them
19. The school and I are like (good friends/enemies)
20. The work I do in most classes is (not at all important to me/very important to me)
23. If you could choose courses, how many of present courses would you take? (all/none)

FACTOR 3 - SCHOOL STRUCTURE (ST)

\+ Upper rankings

25. Work in class is just busy work and a waste of time (Always/never)

Lower rankings

4. Most of my teachers want me to do things their way and not my own way (TF)
6. My teachers often act as if they are always right and I am wrong (TF)

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*If a response other than "TF" (True-False) follows an item, the item was a multiple choice item consisting of 4 or 5 choices. When the item was multiple choice, only the first and last choices are shown to conserve space.

This trend was more clearly evident in Factor 3 in item four ("Most of my teachers want me to do things their way and not my own") and in item six ("My teachers often act as if they are always right and I am wrong.") These two items, which both appeared in the negative area of Factor 3, by their content,seemed to be clearly related to authoritarianism. Item four as noted earlier in the report, also showed significance (toward a negative school climate) when the Chi Square test was applied to the item. And item fourteen (which did not appear in the factor analysis), showed a 52 percent - 48 percent split in responses. On item fourteen ("Most of my teachers do not like me to ask a lot of questions during a lesson"), a 52-48, true-false split seemed to be indicative that inquiry was not encouraged in the school. When all these segments of the school climate data were viewed together, there appeared to be a problem, at the school-wide level, with authoritarianism. This, coupled with the number of negative items in Factor 1 (items 13, 24 and 27), which all indicated boredom with the work done at school, could be symptoms of an educational system which does not allow teachers, or students, much choice in how learning is conducted. These symptoms, coupled with the fact that the school showed the lowest scores in the school district on state-wide academic tests during the

preceding year, was indicative of a significant pattern within the school. The number of items which indicated that students were bored with school may be related to the degree of expectation they experience in relation to academic pursuits. Strongly authoritarian systems, as many studies show, are not particularly conducive to inquiry; and inquiry, by any educator's standards, is closely related to learning.

Factor Graphs. Graphs of the items in each factor were drawn to illustrate more clearly the trends mentioned in the factor analysis section of the report. In each factor the items located in the upper half of the rankings (more positive school climate were graphed first, and then those from the lower half of the rankings (less positive school climate). The graphs were arbitrarily designed as a composite of the first three responses as one bar of the graph, and the last two responses (in the case of multiple choice items) as the other bar of the graph so that true-false items and multiple choice items could be better compared visually. The graphs appear in Appendix III. The graphs clearly indicated, with a few exceptions, the school was eliciting only "fifty-fifty" type responses to most items; that is, the school climate was not much better than one would expect would occur by chance if educators

were not making any specific effort to have a positive environment. The one strong (positive) exception to this, which appeared several places in the graphs, were the good personal relationships which appeared to exist between teachers and students. Students appeared to like and respect their teachers. A second (negative) exception was the strong indication that students experience authoriarianism within the school.

Open-ended Responses. Although no attempt was made to analyze the content of student comments, the outstanding pattern noted was the degree of response; that is, ninty-seven percent of the 141 students in the study responded to the open-ended section of the QSL. Not only did a high number of students respond, but many of them responded at some length. This appeared to indicate that students will take initiative when given an opportunity to do so. When the high rate of response was compared with the information previously noted about the degree of authoritarianism within the school, this provided additional insight into the school's climate.

Summary of Results

Brief Summaries by Grade Level. Although this study reported primarily composite responses, a few brief comments will be made at this point regarding trends within each grade level. These trends were basically noted by viewing

a summarization of responses by grade level to items and by analyzing the responses in terms of each item's content (The information for this section can be noted from the number of responses and percentage responses by grade level in Table I.)

Grade Four. The fourth grade students expressed a high degree of mutual teacher/student respect. They further indicated that their classes were exciting, and they recognized and appreciated the importance of class work. They said they didn't daydream in class, rated their teachers very well, and said the teachers related well to them.

Grade Five. The fifth grade students indicated a perception of less opportunity for input and a perception that they were expected to do things the teacher's way. They further indicated that they perceived teachers as being good to the students. They liked their teachers and saw some relative importance in their classroom work.

Grade Six. The sixth grade students indicated that they were expected to do things the teacher's way. Eighty-eight percent of the students rated their teachers as average or far above average, recognized the importance of class work, and said that they felt their teachers listened to them.

Two points which seemed to be a pattern for students from each grade were:

1) Although, for the most part the students were perceiving themselves as being reasonably productive and satisfied once they get to school,fifty-five percent of the students (78 our of 141) indicated that most of the time they did not want to go to school; and,

2) There was a high degree of teacher respect. The students seemed to feel that their teachers listened to them. The students further said that they were happy when at school, and they liked and valued their courses.

GENERAL TRENDS. Briefly, the composite (whole school) trends which appeared in the data can be summarized by the reviewing the various results of the analyses applied to the data.

Chi Square results. Seven of the fourteen true-false items showed significance at the .05 to .001 level of probability. Of these seven items, six indicated a positive school climate in terms of students' high regard for teachers and students' satisfaction with school activities at the classroom level. However, at the school-wide level, significant results were not indicated; that is, the students' responses showed indication of no more positive school climate than that which would exist if no effort were being made to have a positive school climate, or which would exist by pure chance. For example, fifty-five

percent of the students indicated that most of the time they do not want to go to school.

Of the seven items showing statistical significance, one item showed a negative school climate and indicated that students perceived teachers in a strongly authoritarian role.

School Climate Indices. When the school climate indices for the twenty-seven items (based upon composite responses) were ranked, the five most positive items indicated that students experienced warm relationships with teachers and were fairly interested in their classroom work. The five items ranking lowest, and indicative of a negative school climate, as in the case of the Chi Square data, showed that students perceived a high degree of authoritarianism among teachers and that teachers were not particulary open to inquiry. As in the Chi Square analysis, students indicated (according to the ranked items) that most of the time they did not want to go to school.

School Climate Score. The degree of positiveness toward school climate appeared to decrease with an increase in students' ages. When a percentage comparison was used, comparing an "ideal" school climate score with that attained by the actual composite student responses, a percentage of 68.92 was obtained. In terms of grading system, (A,B,C,D,F,) such as that usually applied to students'

classroom performance, the school climate would receive an overall grade of "D," based on this percentage school climate score.

Factor Analysis. The factor analysis, like the Chi Square results and the rankings of the school climate indices, clearly showed that students have high regard for teachers, and, at the classroom level, are fairly well satisfied with school. Again, however, at the school-wide level, students indicated that most of the time they did not want to go to school and that they experienced a high degree of authoriarianism while at school.

Since the topic of authoritarianism reappears several times throughout the summary of results, the items most closely related to this topic were, briefly, as follows:

1. Both the Chi square analysis and the factor analysis indicated that students perceived that most of the time teachers wanted them to do things their (the teacher's) way and not in the student's own way (item 4);

2. The factor analysis indicated that students perceived that the "teachers often act as if they are always right and I am wrong" (item 6);

3. The Chi square analysis showed non-significant results on item 14; that is, responses were no more positive than might be expected by chance to the item stating,

"Most of my teachers do not like me to ask a lot of questions during a lesson"; and,

4. Three items in Factor 1 of the factor analysis appeared in the lower half of the abbreviated rankings (Table V), which seemed to reflect boredom with class work. (These items were questions 13, 24, and 27.)

When the preceding information was combined with the fact that the school experienced the lowest scores in the school district on state-wide academic tests during the same year the QSL was administered, the trend toward authoritarianism within the school seemed significant.

Factor Analysis Graphs. The factor analysis graphs (Appendix III) reiterated the results previoulsy noted; that is; the school, on the whole, in terms of school climate, was not attaining percentages any greater than would be expected by chance (splits approaching fifty-fifty), except in the area of student-teacher relationships, which were excellent. The one other exception was, again, a pronounced negative attitude in terms of authoritarianism.

Open-ended Responses. When given an opportunity to respond, students did so at a high rate of ninety-seven percent and responded at length.

Summary of Trends

Positive factors of the school climate. The student-teacher relationship seemed to be excellent. Students

seemed to like and respect their teachers at a high level. In most cases, students seemed to express satisfaction with school work at the classroom level.

Negative factors of the school climate. The school, perhaps at the macroscopic or whole-system level, appeared to receive a predominantly negative rating, or, at least, a rating no better than would be expected by pure chance. Students expressed the attitude that they did not want to go to school. In general, there were strong indications that students were experiencing a high degree of authoritarianism.

Recommendations

First, any program design should build upon the excellent student-teacher relationships. This factor is strongly positive and shows a strong note of possibility for the school, because it is highly unlikely that students would perceive teachers so warmly unless the teachers are very concerned and caring toward students. In a school where teachers really care about their students, many things are possible, even in the face of low academic scores.

Second, the nature of control or authority within the school should be investigated collaboratively by teachers and the administration. This recommendation is made based

upon several concepts.

Strongly authoriarian systems are usually generated from the top down; that is, the structure is imposed from the administration, rathar than from the other components of the system. If teachers are permitted little choice in how learning will occur in the classroom, this pattern will inevitably be transferred to students. This is not a suggestion that authority does not properly belong to the administrative personnel of a school; it is, however, a suggestion that some systematic method of teacher input into school policy might eventually affect students. If teachers experience choice in regard to how learning occurs, they must accept more initiative for the learning process. If teachers experience more initiative and control in the classroom, the probability would be high that students would, likewise experience more control over their own learning, since much learning occurs through the process of modeling, as Bandura and others have shown. When students realize that learning, in the final analysis, is a choice they must make, perhaps academic scores would rise. But the key to all this would be some systematic method of teacher input into school policy, especially in relation to curriculum. In strong authoritarian systems, the lower levels of the system generally tend to achieve only the minimum standard set by the higher levels

of the system. This may be passed on to students in terms of lowered expectations of performance. Thus, there are number of reasons for examining the system of management within the school, given the strong trend toward an authoritarian system, as shown in the study. In a Teacher Corps school, the university component could act as a catalyst for collaborative examination of the school's internal system of operation.

Finally, given the high level of boredom expressed by students, the recommendation is made that efforts toward individualization be made. Success with individualization, however, would probably depend upon the building of a more open system of management within the school among teachers and administrators.

APPENDICES

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Chi Square Analysis by grade level

Grade 4. A Chi Square technique was used to analyze the frequency responses for questions one through fourteen. From this analysis the following questions are rank ordered in terms of the chi-square values. Fourth grade responses are as follow:

1.	Question	8	"Most of my teachers listen to me"	x^2 =19.2	p =.001
2.	Question	1	"I count the minutes till class ends " (students responded negatively to this statement)	x^2 =13.06	p =.001
3.	Question	9	"I day dream a lot in class" (students responded negatively to this statement)	x^2 =13.06	p= .001
4.	Question	12	"I like my teachers"	x^2 =9.6	p= .01
5.	Question	7	"I am very happy in this school"	x^2 =8.06	p= .01
6.	Question	11	"I like school very much"	x^2 =4.26	p= .05
7.	Question	5	"I hardly ever do anything exciting in class" (students responded negatively to this statement).	x^2 =4.26	p= .05

For the following questions, the Chi-square values were not not significant (the student's replies were pretty evenly split between true and false responses):

1.	Question	2	"I wish I could have same teachers next year"	T(52%) F(48%)
2.	Question	3	"Most of the time I do not want to go to school"	T(57%) F(43%)

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3.	Question	4	"Most of my teachers want me to do things their way and mot my own way"	T(55%) F(45%)
4.	Question	6	"My teachers often act as if they are always right and I am wrong"	T(47%) F(53%)
5.	Question	10	"Certain students in my classes are favored by my teachers more than the rest"	T(47%) F(53%)
6.	Question	13	"Most of the topics we study in class can't end soon enough to suit me"	T(53%) F(47%)
7.	Question	14	"Most of my teachers do not like me to ask a lot of questions during a lesson."	T(55%) F(45%)

These questions, since the students did not respond to them strongly in one direction or another, could be viewed as weaker elements of the fourth grade program.

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p. 3

Chi Square Analysis by Grade Level

Grade 5. A Chi-square analysis was applied to the block of questions (numbers 1 through 14) for the fifth grade students. Fifth grade responses are as follows:

1. Question 8 "Most of my teachers listen to me" $X^2 = 24.01$ $p = .001$
2. Question 9 "I daydream a lot in class" (students responded negatively to this statement) $X^2 = 21.49$ $p = .001$
3. Question 1 "I count the minutes till class ends" (students responded negatively to this statement) $X^2 = 19.37$ $p = .001$
4. Question 12 "Teachers act so I like them" $X^2 = 10.96$ $p = .001$
5. Question 6 "Teachers act as if they are always right and I am wrong" (majority of responses were in the negative direction) $X^2 = 5.07$ $p = .05$
6. Question 4 "Teachers want me to do things their way." $X^2 = 3.94$ $p = .05$

For the following questions, the Chi-square values were not significant; that is, the students' responses were fairly evenly split between true and false reactions:

1. Question 2 "I wish I could have the same teachers next year" T(61%) F(39%)
2. Question 3 "Most of the time I want to go to school" T(51%) F(49%)
3. Question 3 "I hardly ever do anything very exciting in class" T(40%) F(60%)
4. Question 7 "I am very happy when I am in school" T(56%) F(44%)
5. Question 10 "Certain students in my classes are favored by my teachers more than the rest" T(40%) F(60%)

Appendix I, p. 4

6.	Question	11	"I like school very much"	T(49%) F(51%)
7.	Question	13	"Most of the topics we study in class can't end soon enough to suit me"	T(42%) F(58%)
8.	Question	14	"Most of my teachers do not like me to ask a lot of questions during a lesson."	T(51%) F(49%)

These questions, since the students did not respond to them strongly in one direction or another, could be viewed as weaker elements of the fifth grade program.

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p. 5

Chi Square Analysis by Grade Level

Grade 6. Similarly, a Chi-aquare technique was used to analyze the frequency of responses for questins 1 through 14 for the sixth grade students. The following is a summary of their strongest comments:

1. Question 4 "Most of the teachers want me to do things their way" $X^2 = 4.16$ $p = .05$

2. Question 1 "I often count the minutes till class ends"(students responded negatively to this statement.) $X^2 = 4.16$ $p = .05$

For the rest of the items (questions 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14) in the true-false section, the values for Chi-square were not beyond what pure chance would allow. The true and false responses were, to a large extent, evenly divided. The specific questions and percentage responses follow:

1. Question 2 "I wish I could have the same teacher next year" T(58%) F(42%)

2. Question 3 "Most of the time I do not want to go to school" T(63%) F(37%)

3. Question 5 "I hardly ever do anything very exciting in class" T(46%) F(54%)

4. Question 6 "My teachers often act as if they are always right and I am wrong" T(58%) F(42%)

5. Question 7 "I am very happy when I am in school T(58%) F(38%)

6. Question 8 "Most of my teachers really listen to what I have to say" T(67%) F(27%)

7. Question 9 "I daydream a lot in class" T(38%) F(58%)

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8.	Question	10	"Certain students in my classes are favored by my teachers more than the rest"	T(38%) F(62%)
9.	Question	11	"I like school very much"	T(42%) F(58%)
10.	Question	12	"Teachers here have a way with students that makes me like them"	T(63%) F(37%)
11.	Question	13	"Most of the topics we study in class can't end soon enough to suit me"	T(58%) F(42%)
12.	Question	14	"Most of my teachers do not like me to ask a lot of questions during a lesson."	T(46%) F(54%)

Appendix II, p.1

Details of School Climate Scores

QUESTION	GRADE 4	GRADE 5	GRADE 6	COMPOSITE
1	3.93*	4.65*	3.83*	4.20*
2	3.06	3.45	3.33	3.27
3	2.73	2.96	2.50	2.78
4	2.80	2.47	2.16	2.56
5	3.53	3.38	3.16	3.41
6	3.13	3.59	2.66	3.24
7	3.73	3.24	3.29	3.46
8	4.13	4.29	3.62	4.11
9	3.93	4.23	3.29	3.30
10	3.13	3.38	3.50	3.29
11	3.51	2.96	2.66	3.15
12	3.80	3.87	3.50	3.78
13	2.86	3.31	2.66	3.01
14	2.80	2.96	3.16	2.93
15	4.05	3.43	2.91	3.62
16	3.86	3.22	3.21	3.57
17	3.35	3.02	3.22	3.20
18	4.08	4.03	3.45	3.95
19	3.91	3.84	3.58	3.82
20	4.33	4.05	3.02	4.14
21	3.47	3.31	3.28	3.37

* School Climate indices; see school climate index section of report.

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(Details of School Climate Scores)

QUESTION	GRADE 4	GRADE 5	GRADE 6	COMPOSITE
22	3.85*	3.52*	3.29*	3.62*
23	3.93	3.73	2.83	3.68
24	3.86	3.40	2.91	3.51
25	3.33	3.73	3.58	3.61
26	3.18	2.80	2.91	2.98
27	3.90	3.73	3.08	3.49
School Climate Score:	96.17	94.55	84.59	93.05
Percentage Score:	71.23%	70.03%	62.65%	68.92%

The percentage score was in reference to 100% as the maximum. The totals were each divided by the maximum score of 135. These scores not only give an idea of the school climate score (composite), but they also give values for between grade comparisons.

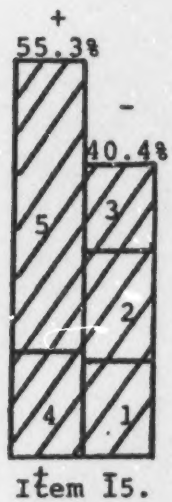
* Score climate indices; see school climate index section of report.

APPENDIX III: Factor Analysis Groups

(Page 1)

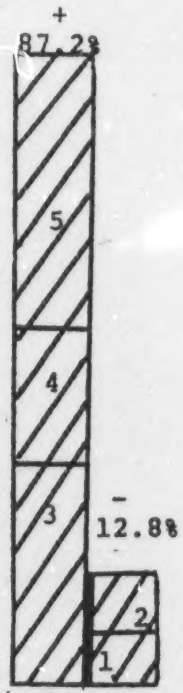
FACTOR ONE

Part A - Positive Items (Those Above the Midpoint of Rankings)



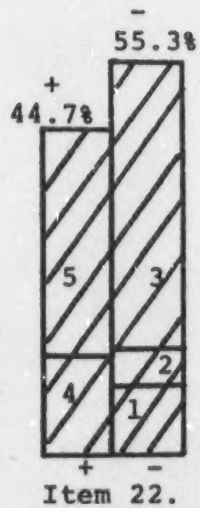
Item 15.

"This term I am eager to get to...
1. None of my classes;
2. One or two;
3. About half;
4. Most of my classes;
5. All of my classes."



Item 16.

"How would you rate the ability of most of your teachers compared to teachers in other schools at your grade level? My teachers are...
1. Far below average;
2. Below average;
3. Average;
4. Above average;
5. Far above average."



Item 22.

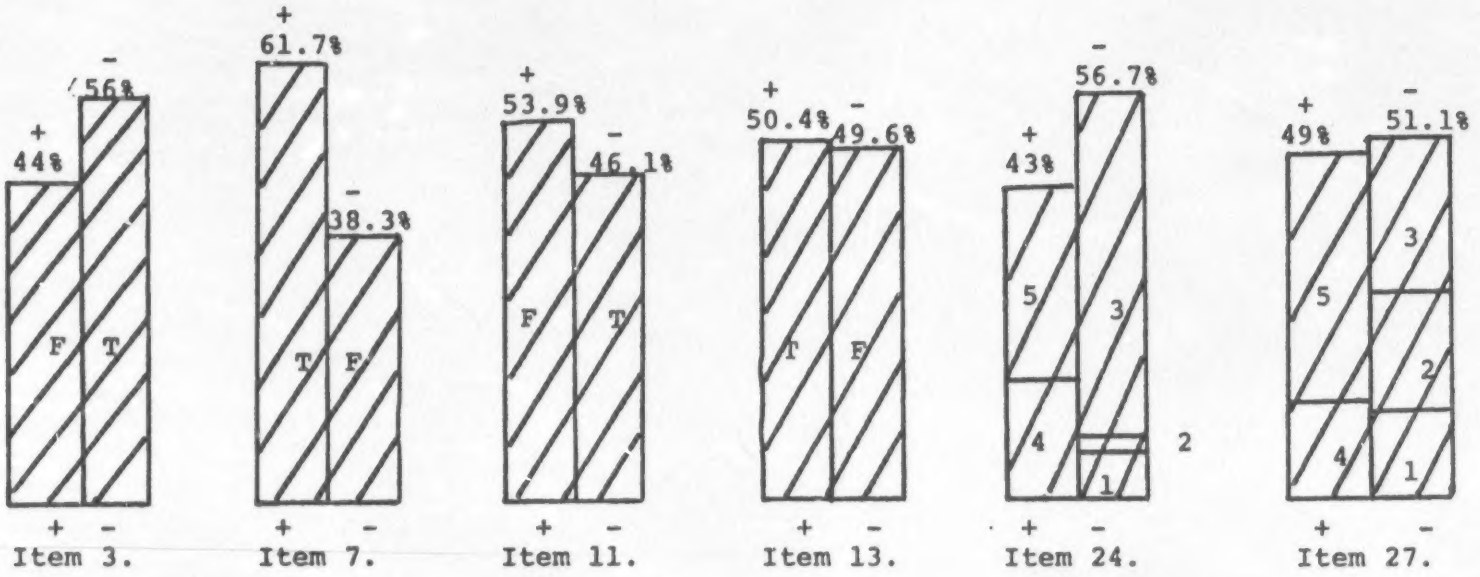
"The things I get to work on in most of my classes are...
1. Trash;
2. Dull stuff;
3. OK;
4. Good stuff;
5. Great stuff."

APPENDIX III: Factor Analysis Groups

(Page 2)

FACTOR ONE

Part B - Negative Items (Those Below the Midpoint of Rankings)



Item 3. "Most of the time I do not want to go to school."

Item 7. "I am very happy when I am in school."

Item 11. "I like school very much."

Item 13. "Most of the topics we study in class can't end soon enought to suit me."

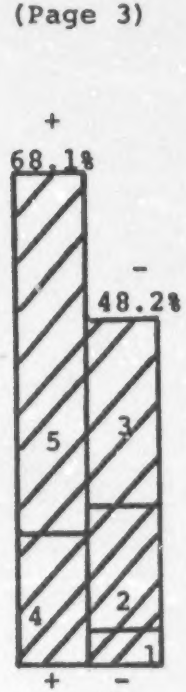
Item 24. "I enjoy the work I do in class...
1. Never;
2. Seldom;
3. Sometimes;
4. Often;
5. Always."

Item 27. "School work is dull and boring for me...
1. Always;
2. Often;
3. Sometimes;
4. Seldom;
5. Never."

APPENDIX III: Factor Analysis Groups

(Page 3)

FACTOR TWO (All positive)

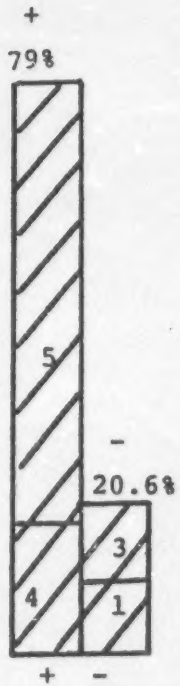


Item 18.

"Thinking of my teachers this term, I really like...
1. None of them;
2. One or two;
3. Half of them;
4. Most of them;
5. All of them."

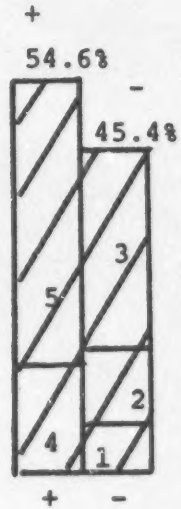
Item 19.

"The school and I are like...
1. Enemies;
2. Strangers;
3. Distant relatives;
4. Friends;
5. Good friends."



Item 20.

"The work I do in most classes is...
1. Not at all important to me;
2. Not too important to me;
3. Pretty important to me;
4. Very important to me."



Item 23.

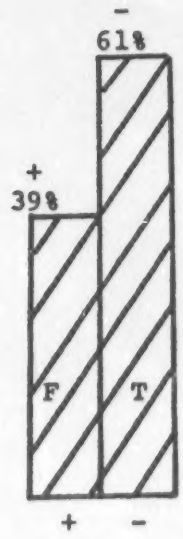
"If you could choose to take any course at all, how many of your present courses would you take?
1. None;
2. Fewer than half;
3. About half;
4. More than half;
5. All of them."

APPENDIX III: Factor Analysis Groups

(Page 4)

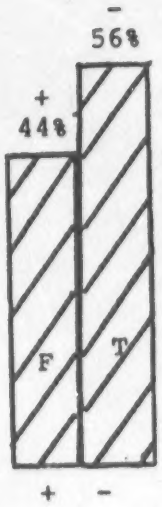
FACTOR THREE

(All negative)



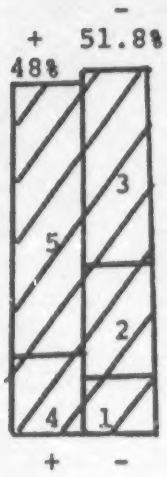
Item 4.

"Most of my teachers want me to do things their way and not my own way."



Item 6.

"My teachers often act as if they are always right and I am wrong."



Item 25.

"Work in class is just busy work and a waste of time...
1. Always;
2. Often;
3. Sometimes;
4. Seldom;
5. Never."